EVERY MAN A SCIENTIST George Kelly's PSYCHOLOGY OF PERSONAL CONSTRUCTS

David B. Center PSY 616 Winter, 1972

Summary

THE MAN: Born 1905 Kansas. Attended Friends University in Kansas. B.S. in Physics and Math, Park College in Missouri. Intercollegiate Debater. Master's in Sociology of Education at University of Kansas. Teacher and Aeronautical Engineer. Bachelor of Education Degree 1930 University of Edinburgh. Ph.D. in Psychology 1931 State University of Iowa. Taught ten years at Fort Hays State College in Kansas. Major interest at Fort Hays was psychological services for state's schools. Traveling psychological clinic. World War II Aviation Psychologist U.S. Navy and Bureau of Medicine & Surgery, Aviation Psychology Branch. 1946 Professor and Director of Clinical Psychology of Ohio State University. Next twenty years at Ohio State, 1955, THE PSYCHOLOGY OF PERSONAL CONSTRUCTS, 2 vols. President of Clinical Division APA. President, American Board of Examiners in Professional Psychology. 1965, Riklis Chair of Behavioral Science at Brandeis. Died March 1966 of heart attack.

INFLUENCED BY: Sir Godfrey Thomson, Prescott Lecky, Carl Rogers, Alfred Adler and possibly Piaget. Husserl (Phenomenology) and Vaihinger (Pragmatism).

THEORY: Personal constructs, consist of three elements with a similar aspect; e.g., friendliness, two elements alike and one in contrast. Thus, A and B friendly, C unfriendly; construct friendly vs. hostile. Constructs unique and personal dimensions for construing one's experiences and anticipating or predicting events. Basic Postulate: A person's processes are psychologically channelized by the ways in which he anticipates events. Eleven corollaries: construction, individuality, organization, dichotomy, choice, range, experience, modulation, fragmentation, commonality, sociality.

TERMS: Range of convenience, focus of convenience, core constructs, peripheral constructs, permeability, impermeability, tightness, looseness, verbal construct, preverbal construct, submersion, superordinate and subordinate constructs, anxiety, fear, threat, aggression, hostility, guilt, C-P-C cycle, REP test, fixed role therapy.

INFLUENCES AND RESEARCH: James Bieri, complexity-simplicity dimension defined as information processing variable and an important personality dimension. Harvey, Hunt and Schroder, abstract-concrete continuum. Important personality dimension. Stages of development and environmental influences.

CRITICISM: Development of constructs vague. Little on psychological development of individual. Little discussion of affective states. Limitations on clinical applications.

OVERIEW: Read; Pervin, L. A. Personality: Theory, Assessment and Research. New York: Wiley, 1970 (ch/7).

The most obvious characteristic to emerge from a reading of biographical sources on George A. Kelly is that of diversity of experience and interest. Kelly was born in 1905 in Kansas and remained there until he reached adulthood. He began his under graduate work at Friends University in Kansas and completed his studies at Park College in Missouri. His bachelor's degree was in Physics and Mathematics, but his interest had already begun to shift toward social problems. The shift in his interest from physical science to social problems was possibly due to his active interest in intercollegiate debating. As a result of his shift in interest Kelly pursued graduate study in Educational Sociology at the University of Kansas.

After receiving his Master's Kelly began his life-long involvement in the teaching profession. He was a part-time instructor at a labor college in Minneapolis, taught speech classes for the American Bankers Association, and taught Americanization classes for future citizens.

After a brief period as an Aeronautical Engineer in Wichita, Kelly returned to teaching. He held a teaching post at the University of Minnesota until 1929.

In 1929 Kelly resumed his education as an exchange scholar at the University of Edinburgh. He was under the direction of Sir Godfrey Thomson at Edinburgh, and received a Bachelor of Education Degree in 1930. The topic of his Bachelor of Education Thesis was Prediction of Teaching Success. Kelly returned to the United States in 1930 and began graduate study in psychology at the State University of Iowa. He received the Doctor of Philosophy Degree from Iowa in 1931 with a dissertation dealing with common factors in speech and reading disabilities.

After receiving his Ph.D. Kelly returned to the teaching profession, taking a post at Fort Hays Kansas State College. During his ten years at Fort Hays, Kelly's major interest was the problem of providing clinical psychological services for the schools of the state. It appears that

Kelly's Psychology of Personal Constructs had its beginnings in his experiences in the public schools of Kansas.

Kelly's early clinical experience occurred in the public schools of Kansas. While there, he found that teachers referred pupils to his traveling Psychological Clinic with complaints that appeared to say something about the teachers themselves; that is, instead of attempting to verify a teacher's complaint, Kelly decided to try to understand it as an expression of the teacher's construction of events (Pervin, 1970, p. 335).

At the onset of World War II, Kelly entered the Navy as an Aviation Psychologist. Later he was moved to the Bureau of Medicine and Surgery in Washington in the Aviation Psychology Branch where he remained until the end of the war in 1945.

In 1945 Kelly returned to the teaching profession as an Associate Professor at the University of Maryland. In 1946 he was appointed Professor and Director of Clinical Psychology at Ohio State University. During his twenty years at Ohio State, Kelly made his most important contributions to the field of psychology. Kelly's major contribution came in 1955 with the publication of his two-volume work, the PSYCHOLOGY OF PERSONAL CONSTRUCTS. While at Ohio State Kelly held many important professional posts. He was President of the Clinical Division of the American Psychological Association, and served as President of the American Board of Examiners in Professional Psychology.

Kelly's diverse background no doubt played an important role in the development of his theory of personal constructs.

Kelly admits intellectual debts to an exceptional range of fine teachers, including psychologists Sir Godfrey Thomson, James Drever, Sr., Carl Seashore and L. E. Travis, Sociologist W. R. Smith and W. F. Ogburn, and even naturalist, Edwin Teale. Is it any wonder, the, that Kelly arrived to the conclusion that it is possible, or should be, to see any number of dimensions in the world of mundane experience and fact (Sechrest in Wepman, 1963, p.210)?

In 1965 Kelly was appointed to the Riklis Chair of Behavioral Science at Brandeis University. George Kelly died in March 1966, leaving incomplete his work on a new book. Pervin (1970) probably has best described Kelly in this brief statement: "An adventuresome soul who was unafraid to think unorthodox thoughts about people and who dared to explore the world of the unknown with the tools of tentative hypotheses (p.334)."

Important to an understanding of the psychology of personal constructs is some knowledge of both the philosophical and psychological influences on George Kelly's thinking. Kelly calls his philosophical position constructive alternativism. The school of philosophy known as phenomenology, of which Edmund Husserl was a leader, is very close to Kelly's position. Phenomenology starts with the human subject and his consciousness, the experiencing knower, and attempts to build a "theoretical science" that might serve as a root science for all subsequent scientific endeavors. Kelly has also made references to the German Philosopher Vaihinger's "Philosophy of 'as if'." Vaihinger's position is essentially pragmatic. Pragmatism is a philosophical position developed by C. S. Peirce, William James and John Dewey. Pragmatism emphasizes experience, experiential inquiry, and truth as that which has satisfactory consequences.

Some writers (Sechrist in Wepman, 1963, Rychlak 1968) place Kelly in the traditions of nominalism and idealism. Nominalism is the theory that "universals" or general terms are only names and represent no objectively real existents; all that exist are particulars. Idealism is a similar philosophical position which asserts that reality consists of ideas, thought, mind or selves rather than of matter.

The philosophical underpinnings of Kelly's theory would appear to be phenomenology, nominalism and idealism. The philosophical base underlying Kelly's unique clinical approach,

fixed role therapy, would appear to be pragmatism and particularly Vaihinger's "Philosophy of 'as if'."

Kelly gives thoughts an existence of their own. Ideas must be taken seriously. Man's thought processes are part and parcel of his reality, and it is just as true to say that his ideas create reality as it is to say his ideas reflect or map reality. Kelly's de-emphasis of realism as a theoretical presupposition permits him to view man as much less determined, much more the maker of his fate, and at all times the master rather than the slave of reality (Rychlak, 1968, p.20).

All theories of personality make philosophical assumptions about the nature of man and Kelly is no exception. Some theories view man as a mechanical model or a biological model, but Kelly uses a scientific model – man is a scientist. Kelly defines a scientist as one who attempts to predict and control phenomena, and a psychologist as a scientist who attempt to predict and control behavior, but a scientist who has tended to overlook this same "motive" in his subjects.

It is a s though the psychologist were saying to himself, "I, being a psychologist, and therefore a scientist, am performing this experiment in order to improve the prediction and control of certain human phenomena, but my subject, being merely a human organism, is obviously propelled by inexorable drives welling up within him, or else he is in gluttonous pursuit of sustenance and shelter (Kelly, 1955, p.5).

While Kelly admits his indebtedness to Husserl and Vaihinger as his philosophical antecedents, the case for his psychological antecedents is not so clear. In Kelly's exposition on basic theory he only once openly acknowledges a debt to another personality theorist, Prescott Lecky. Lecky emphasizes a person's need for self-consistency and puts particular emphasis upon the preservation of those aspects of one's cognitive system which have to do with the self. In his development of the implications of the organization corollary, Kelly indicates his indebtedness to Lecky but qualifies his acceptance and use of Lecky's theory.

However, our view is that it is not consistency for consistency's sake nor even self-consistency that gives man his place in the world of events. Rather it is his seeking to anticipate the whole world of events and thus relate himself to them that best explain his psychological processes. If he acts to preserve the system, it is because the system is an essential chart for his personal

adventures, not because it is a self-contained island of meaning in an ocean of inconsequentialities (Kelly, 1955, p.59).

Kelly also makes reference to Carl Rogers in his exposition on basic theory, but acknowledges no particular debt to Rogers. However, Kelly does indicate a preference for the term "client" over that of "patient", and one might suppose that Kelly borrowed that term from Rogers, and perhaps was influenced in other ways not so obvious. A reference is also made to Alfred Adler and Adler's concept of "style of life". It appears that Kelly is equating his concept of "superordinate constructs" with Adler's "style of life" concept. However, Kelly is careful to point out that a superordinate construct is part of a system, not the system per se.

Some writers have suggested influences on Kelly's thinking by other psychological theorists.

In so much as Kelly views behavior in its anticipatory aspects, there are obvious similarities to the theories of Adler as presented by Dreikurs. From the standpoint of Adlerian Theory, behavior is determined by expectations and intentions of the person (Sechrest in Wepman, 1963, p. 230).

With respect to ancestry, Professor Kelly seems to care little for it. One misses references to such works as Piaget's THE CHILD'S CONSTRUCTION OF REALITY, the early work of Werner, and the writings of Harry Stack Sullivan, Levin and Allport – all of whom are on his side and good allies to boot (Bruner in Mancuso, 1970, p. 62).

It is difficult to trace directly the influences on Kelly's thought, but one can be fairly certain that those theorists who did influence him worked from cognitive, phenomenological, rational and interpersonal frames of reference.

George Kelly's Psychology of Personal Constructs evolved primarily out of his experience as a clinician. The majority of Kelly's experience was with public school pupils and college students. Consequently, one would not expect him to have had much experience with extreme pathology. Probably the greater portion of his clinical experience was with college

students and persons affiliated with the university. His focus on the intellective aspects of behavior and his relatively rational approach to behavior and therapy is no doubt closely associated with the type client he was most frequently in contact with. It may be fairly safely assumed that, for the most part, his clients were persons capable of construing their behavior and communicating it in verbal and rational terms.

How wide a population Kelly's theory might be applied to is hard to say. One would imagine that his approach would be most applicable to relatively well-educated persons from middle class backgrounds. It would be difficult to imagine how one might use his approach effectively with the severely disturbed, the very young, illiterates, persons characterized as "non-verbal", the culturally disadvantaged; e.g., persons from cultural backgrounds incongruent with that of the therapist. There is no intention to imply that Kelly's theory can not provide an explanation and means of understanding the behavior of such persons, but only that it would be difficult to apply it clinically in such cases. The problem is, in essence, one of communication. Kelly's theory holds that while constructs have a degree of generalizability, they are personal, and therapy is to a great degree dependent on the client's ability to communicate to the therapist, in terms understandable to him, information concerning his personal constructs. If the client can not effectively communicate with the therapist there is little basis for appropriate clinical action.

George Kelly's personality theory is very rationally and systematically presented in the form of one basic postulate and eleven corollaries. Before taking up the postulate and its corollaries a definition of a personal construct is needed. A personal construct is a unique and personal dimension consisting of bipolar opposites. In order to have a construct three elements are needed two elements which are alike and one which is unlike the other two; e.g., Bill and Larry are friendly but Joe is hostile. Thus, the construct friendly vs. hostile emerges. In saying

that a personal construct is unique, it is not meant that only one person may have the construct friendly vs. hostile, but rather each person having the construct will utilize it in a unique and personal way. No two persons, generally speaking, will use the same construct in exactly the same way though they may use it in very similar ways if they have acquired it through similar experiences. A personal construct then is an interpretive and organizational dimension through which a person construes his experiences.

A construct is similar to a theory in that it has a number of dimensions which characterize it:

- 1. Range of Convenience, all those events for which its user might find it useful.
- 2. Focus of Convenience, those particular events for which its user finds it most useful.
- 3. Core Constructs, constructs which are basic to a person's functioning.
- 4. Peripheral Constructs, constructs which may be altered without major changes in core constructs.
- 5. Permeability, new elements may be brought into the range of convenience.
- 6. Impermeability, new elements tend to be rejected.
- 7. Tightness, the construct leads to unvarying predictions.
- 8. Looseness, the construct allows for discriminations which permit varying predications according to circumstances.
- 9. Verbal Construct, the construct has a consistent verbal symbol that is applied to it.
- 10. Preverbal Construct, the construct has no consistent verbal symbol that may be applied to it.
- 11. Submersion, one end of a construct is submerged; i.e., not verbalizable.
- 12. Superordinate and Subordinate Constructs, constructs are organized into relatively compatible and consistent hierarchical arrangements. The nature of the organization scheme used tends to be unique and personal.

13. External and Internal, any construct that may be applied externally may also be applied internally; i.e., to the self.

BASIC POSTULATE: A person's processes are psychologically channelized by the ways in which he anticipates events (Kelly, 1955, p. 46). Kelly is saying that the person is a whole and integrated individual who may be viewed as a process or form of motion as opposed to an object temporarily pushed or pulled into motion. The person's processes are psychologically processes are psychological as opposed to physiological, but rather, for his purposes, Kelly chooses to construe them psychologically. The processes are channelized or routed through the ways or means which the person has arrived at as the best methods for reaching his goals. Each person anticipates or predicts the course of events.

CONSTRUCTION CORROLLARY: A person anticipates events by construing their replications (Kelly, 1955, p. 50). By construing, Kelly means "placing an interpretation upon." By replication Kelly means not necessarily exact duplication but rather the perception of similarities between two or more things.

INDIVIDUALITY COROLLARY: Persons differ from each other in their construction of events (Kelly, 1955, p. 55). Kelly is saying here that there are individual differences and those differences result in the unique and personal nature of constructs. Perhaps it would be best to let Kelly speak for himself:

No two people can play precisely the same role in the same event, no matter how closely they are associated. For one thing, in such an event, each experiences the other as an external figure. For another, each experiences a different person as the central figure (namely himself) (Kelly, 1955, p. 55).

ORGANIZATIONAL CORROLLARY: Each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs (Kelly, 1955, p. 56). Different constructs may be applicable to the same

event and may suggest incompatible predictions which would result in personal conflict. Hence, each person evolves a personal system of ordering constructs in a hierarchical arrangement. The construction system is not static but evolving; however, it does remain relatively more stable than individual constructs and tends to be over-all more characteristic of the person that any one individual construct. Some constructs in the system are superordinate while others are subordinate or subsumed by another construct. The hierarchical arrangement of constructs tends to minimize inconsistent and contradictory predictions.

As happens from time to time, a person finds that his predictions are not working out very well and a remodeling job is apparently in order. Depending on the seriousness of the conflict a choice must be made between changing the construction system or preserving its integrity. Kelly warns that it is at this point that the therapist may fail to realize why his client becomes resistant. It is also a point of danger because if the therapist fails to understand why the resistance has manifested itself he may do his client more harm that good.

DICHOTOMY COROLLARY: A person's construction system is composed of a finite number of dichotomous constructs (Kelly, 1955, p. 59). Kelly assumes that all constructs follow the bipolar or dichotomous form. The three elements necessary to form a construct must be related in a similar aspect, but also be bipolar. All constructs systems, no matter how complex, have finite limits.

CHOICE COROLLARY: A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system (Kelly, 1955, p. 64). Kelly uses the term "elaborative choice" by which he means the choice within a dichotomy which appears to offer the greatest possibility for refining one's construct definition, and hence allowing for more accurate discriminations. The greater the

range of possible discriminations that can be made the more widely applicable and useful is the construct.

RANGE COROLLARY: A construct is convenient for the anticipation of a finite range of events only (Kelly, 1955, 0. 68). Kelly is referring to the range of convenience which is associated with a construct. A construct may be applied very narrowly or widely. The clinician must often carefully study the similarities and contrasts that are used in a client's definition of a construct before he can fully grasp the range. At times the client will concentrate only on one end of the construct and the other end must be deduced by implication.

EXPERIENCE COROLLARY: A person's construction system varies as he successively construes the replications of events (Kelly, 1955, p. 72). This is an important corollary in Kelly's theory, for it is closely associated with the evolution of the construction system. Every time a person encounters something unexpected he has the opportunity to place a new construction on it. The constructions one uses are working hypotheses which must be put to the test of experience over time. A continuous process of validation and revision allows the construction system to undergo a progressive evolution. The experience corollary is very closely related to time in Kelly's theory.

The essential referent dimension along which all orderliness and organization must be construed is that of time. Except as there is a seasonable replication of events or aspects of events, no organization whatsoever can be ascribed to the universe and there is no such thing as experience. The discovery of replicative themes is not only the key to experience, it is the key to natural law (Kelly, 1955, p. 75).

MODULATION COROLLARY: The variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie (Kelly, 1955, p. 77). The Experience Corollary states that one's construct system varies with experience

and progressively evolves. The progressive variation of the system must also take place within a system. The elements of behavior can not be lawful and the patterns be unlawful.

The construction system is composed of complementary superordinate and subordinate relationships. The subordinate systems are determined by the superordinate systems which subsume them. The superordinate systems are free to vary the arrangement of subordinate systems under their jurisdiction. The changes which a person attempts within himself must be construed by him. For change to take place one's superordinate constructs must be permeable enough to admit to their range of convenience new elements. The introduction of new elements, even in the subordinate system, result in subtle changes in the superordinate constructs. The permeability or lack of it in superordinate constructs can have considerable import on the course of therapy. Impermeable superordinate constructs are usually basic conceptualizations which are rooted exclusively in the past.

FRAGMENTATION COROLLARY: A person may successively employ a variety of construction subsystems which are inferentially incompatible with one another (Kelly, 1955, p. 83). Kelly states that it is not desirable for everything to be consistent with everything else because there is no construct where everything is consistent. There must be contrast if there is to be a construct and an aid in anticipating events. What counts is not that every prediction is validated, but rather that, over time, the net result is validation of the system in general. Thus, incompatible subsystems or even elements within a subsystem can be tolerated and are, in fact, even beneficial, allowing that the net result for the construction system is validation.

COMMONALITY COROLLARY: To the extent that one person employs a construction of experience which is similar to that employed by another, his processes are psychologically similar to those of the other person (Kelly in Mancuso, 1970, p. 48). Note this does not mean

that identical or very similar experiences for two different people will result in similar psychological processes. Rather, it means that two person's psychological processes will be similar if their construction systems are similar; i.e., they construe experience along similar dimensions. The experiences themselves may be dissimilar.

SOCIALITY COROLLARY: To the extent that one person construes the construction processes of another; he may play a role in a social process involving the other person (Kelly, 1955, p. 95). In order to have purposeful interpersonal interaction it is necessary for the individuals involved to subsume one another's construction system within their own. The degree to which this reciprocal construing is necessary and the range of the aspects to be subsumed depends on the complexity and nature of the interaction. Once the necessary aspects have been subsumed, it is possible for one individual to interact with another individual in a defined and predictable manner; i.e., play roll in relation to the individual whose construct system has been construed by the role-player.

Several points should be made in regard to roles in Kelly's theory. First, the construing of another person's construction system does not have to be very accurate. In some cases it does not have to be at all accurate. Second, the construing of another person's outlook does not prevent you from working at cross-purposes. Third, the term role is confined to the psychological nature of individual experience and has nothing to do with the nature of society or economic assumptions, per se. fourth, before it is possible to take a role in relation to another, it is necessary to become experientially involved with that person's outlook; i.e., put one's self in the other person's shoes. Fifth, a role relationship does not have to e reciprocated. Sixth, role is not equivalent to "self-concept."

In addition to the exposition on basic theory, several other concepts in clinical psychology are redefined by Kelly's theory. First, anxiety is considered to be the result of being confronted by events which lie outside the range of convenience of one's construct system. In short, one is faced with an event for which there is no readily available structural dimension through which it can be channeled. Second, fear is the result of the impending inclusion of a new construct within one's system. It is the fear of the unknown. One can never be certain what the consequence of a new construct will be on the structural integrity of the old construction system. Third, threat is the product of awareness of an imminent and far-reaching change in one's core constructs; i.e., constructs which maintain the pattern of consistency for the system as a whole or a large portion of it. Fourth, aggression is the consequence of an individual attempting to expand his perceptual field; i.e., to get a grasp on phenomena not previously considered or dealt with. Aggression in Kelly's theory is not undesirable, nor is it associated with hostility. Fifth, hostility is an active and continued effort to extort validational evidence from others. It is the product of efforts to validate a prediction that has already failed. It is trying to make another behave as expected. Sixth, guilt is the consequence of recognizing that the self has been displaced from the core role structure. In other words, guilt ensues from being alienated from the roles through which one maintains one's most important relationships with others. Finally, pathology is defined by Kelly as "any personal construction which is used repeatedly in spite of consistent invalidation (Kelly in Pervin, 1970, p. 355).

Another concept developed by Kelly should also be mentioned, the C-P-C Cycle or Circumspection-Preemption-Control Cycle. Each individual first construes his environment by circumspection. He begins by considering his perceived situation against a number of his constructs. The next step is the preemption phase in which the individual reduces the number of

alternative constructs to the ones which appear most relevant. In the control phase the individual makes his choice from the relevant constructs. The choice is based on an estimate of which alternative has the greatest probability of leading to extension and definition of the system, that is, in that individual's opinion.

Two important results of Kelly's theory have been the REP (Role Construct Repertory) test and "Fixed-role Therapy." The REP test is an undisguised, non-structured and voluntary assessment instrument. The REP test is used to ascertain the constructs used by a person to define, interpret or construe his environment. A brief description of the mechanics of the test follow:

Generally, twenty to thirty roles are presented, and for each role the subject is asked to indicate the name of someone he knows or has known. Following the completion of the responses to the Role Title List, the examiner asks the subject to consider three specific figures and to indicate which two are alike in an important aspect and, at the same time, are different from the third. The way in which two of the figures are alike is call the construct pole, or similarity pole, of the construct dimension; the way in which two of the figures are different from the third figure is called the contrast pole of the dimension. After the first construct has been elicited, the procedure of presenting triads of roles is repeated, usually 20-30 times. With each presentation of a triad, the subject generates a construct dimension (Pervin, 1970, p. 344).

The other result of Kelly's theory is Fixed-role Therapy. Fixed-role Therapy is essentially based on the assumption that a man is what he presents himself as and what he does. Fixed-role Therapy is designed to allow a person to experiment with new ways of presenting himself, behaving and construing himself. In brief, the client reconstructs himself. In therapy the client is given a personality sketch which has been designed by several clinicians (preferably) and asked to act "as if" he were that person. The sketch is designed to provide a personality which is considerably different from that of the client. Kelly believes hat it is easier to behave in an opposite manner than to behave just a little differently. The client is asked to play the new role and test it out experimentally and under "make-believe" conditions. The experimental and

"make-believe" setting is provided to prevent the client from experiencing too much threat from the new role. The object of the therapy is not to change parts of the personality, but to reconstruct the entire personality.

What I am saying is that it is not so much what a man is that counts as it is what he ventures to make of himself. To make the leap he must do more than disclose himself; he must risk a certain amount of confusion. Then, as soon as he does catch a glimpse of a different kind of life, he needs to find some way of over-coming the paralyzing moment of threat, for this is the instant when he wonders what he really is – whether he is what he just was or is what he is about to be (Kelly in Maher, 1969, p. 158).

A number of concepts in Kelly's theory of Personal Constructs have been researched. In view of space limitations the research will be briefly reported, and the interested reader is referred to the source.

Permeability as a feature of conceptualization has been studied (McGaughran in Kelly, 1955, p. 79). McGaughran has shown through his investigation that certain highly abstracted characteristics of a person's verbal behavior were predictive of his nonverbal behavior when dealing with palpable objects.

Constructs as dichotomous abstractions have been studied (Lyle in Kelly, 1955, p. 106-8). Lyle's research indicated that if one element of a person's construct makes sense in a public system, his personal construct of that element's antonym will also make sense.

Importance of prediction to the individual has also been studied (Pervin, 1970, p. 351). Pervin found that subjects seek to validate their predictions and will prefer pain from electric shock if no shock meant the invalidation of their prediction.

Interrelatedness of constructs has also been investigated (Bannister and Fransella in Pervin, 1970, p. 357). Bannister and Fransella hypothesized that if constructs are interrelated, a test requiring consistent ordering of constructs should discriminate between thought-disordered schizophrenics and non-thought disordered subjects. Their hypothesis was confirmed.

Generality of constructs and superordination has been researched (Williams in Wepman, 1963, p. 214). Williams found that the most useful constructs of an individual tend to be those which are broadly general in that they cut across construct dimensions, which supports the Organization Corollary.

The REP test has been investigated and that research has been summarized (Bonarius in Pervin, 1970, p. 349). Bonarius reports that research over a ten-year period indicates that the REP test is a safe instrument providing consistent information. The material elicited by the test is representative of the persons who make up a subject's social world, and of the constructs he applies to them.

The above review of research is not meant to be exhaustive but indicative. For example, see: Hamilton, R. J., 1658; Landfield, A. W., 1958; Poch, S. M., 1958; Sechrest, L., 1968; Maher, p. 353-4.

George Kelly's theory and work have influenced a number of persons in personality research. For the sake of brevity only two will be mentioned.

James Bieri, a former student of Kelly's, pursued studies in one particular area of Kelly's theory – cognitive complexity. Bieri has been interested in and has stressed the importance of complexity-simplicity as a dimension of personality. Cognitive complexity-simplicity is now defined by Bieri as an information processing variable. The complexity-simplicity variable is also considered to be important in discrimination among social cues and in making judgments from more or less differentiated information. Bieri also developed the complexity-simplicity variable as a means of discriminating among cognitively simple and cognitively complex persons. Also, the complexity-simplicity variable as developed by Bieri is capable of indicating levels of confidence on judgments, types of information that will be sued in forming impressions,

and whether differences of similarities will be stressed between "self" and others (See Bieri, 1955, 1961, and 1966).

Harvey, Hunt and Schroder have been influenced by Kelly in their work on personality types and the process of individual-environment interaction. These researchers have been influenced by Kelly's thinking in their work on abstract vs. concrete personalities, and in their work on development. Harvey, Hunt and Schroder have described four stages of development along their abstract-concrete continuum. The four stages are related to parental training conditions and to different types of psychopathology. These investigators have also determined that the level of complexity upon which a person relates is variable according to the people, situation, or environment being related to.

Finally, the level of environmental complexity appears to be related, in general, to skill at processing information. In particular, a moderate level of complexity in the environment seems to evoke more skillful information processing than does a very simple or very complex environment. (see Harvey, et al., 1961).

There are several areas in which Kelly's theory might be criticized. First, Kelly has left the issue of how constructs come into existence somewhat vague. That a construct system evolves and becomes manifest seems to be almost an assumption on Kelly's part. Second, and related to the first, there is very little attention given to psychological development of the human organism. Hopefully, Harvey, Hunt and Schroeder's work is remedying this problem. Third, there is very scant, if any, treatment of affective states; e.g., love, hate, anger; etc., in Kelly's theory. Fourth, the clinical application appears to be a bit limited. Fifth, Kelly could have been more explicit in laying out his historical antecedents. Sixth, a few illustrative examples would have aided his presentation of the theory, particularly in relation to the corollaries.

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GUIDE TO DIAGRAM

- Ia. A vs B core construct, superordinate
 - r-k; etc peripheral constructs, ordinally related
 - (3) an event in the environment
 - SI Perceives (3), C-P-C Cycle selects the construct r-k; i.e., the event (3) is construed to fall in the range of r-k and in this instance to be most similar to (r). (I) has certain anticipations and makes predictions relative to (3) based on the replicative aspects of (r) and (3). (I)'s processes are channelized by these anticipations and reacts (S).

Construction Corollary, (3) construed as similar to (r).

Organization Corollary, r-k is subordinate to d-e and p-g is subordinate to r-k.

Dichotomy Corollary, r-k are bipolar opposites.

Choice Corollary, (r) is chosen rather than (k).

Range Corollary, the event (3) is perceived as being in the range of r-k. Another event (5) might not be so perceived.

Fragmentation Corollary, it is possible for r-k to be inconsistent with, e.g., h-r.

- Ib. Event (3) does over time conform to the anticipations based on (r), and (S) is appropriate. r-k has been validated by correctly construing and anticipating (3). The system is better defined as a result.
- IIa. (II) perceives (3) and selects d-e; i.e., (3) is construed to be in the range of d-3 and in this instance to be most similar to (e). (II)'s processes are channelized by anticipations and prediction sand reacts (F).

Individuality Corollary, (II) selects (e) rather than (r) as most convenient for anticipating (3).

IIb. Suppose (II) determines that (3) is actually a novel event or has novel elements which make the construct d-e inappropriate and invalidates the predictions based on that construction; the reaction (F) will also be inappropriate because it is based on an invalid assumption. Assuming permeability of the constructs, a change in the system is in order.

Modulation Corollary, permeability of constructs allow for modification.

IIc. (II) makes a modification in the system, r-k. (3) is re-construed. On the basis of new anticipations and predications (II) reacts (S). If this modification proves appropriate the new predictions will be validated and the system will be extended.

Experience Corollary, the new element r-l is added to the system.

Commonality Corollary, (I) has r-k and (II) has r-k, react (S).

Sociality Corollary, if either (I) or (II) were to construe the constructions of the other to some degree, it would be possible for a role to be taken in relation to that person in any appropriate social process.

